REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-55 were in this Application, of which Claims 1-3, 10, 14, 17, 19, 28, 30-32, 35, 36, 45, and 52 were canceled in a previous response, and claims 4-9, 11-13, 15, 16, 18, 20-27, 29, 33, 34, 37-44, 46-51, and 53-55 have been rejected.

Claims 1-55 are canceled herewith or in the past.

New claims 56-79 have been added herewith.

Amendments To The Claims

General remarks

Applicant is interested in achieving a speedy allowance of the present application, while incurring the least costs, and hereby cancels all outstanding claims and submits new claims 56-79, corresponding to allowed claims 1-24 of Applicant's corresponding European patent application EP 1 593 227.

In general, the changes to the claims are as follows, with more detail and support added further below:

new claim 56 is similar to original claim 30, with some changes detailed below;

new claim 57 states in dependent form some of the limitations of original claim 1;

new claims 58, 59-61, 62-66, 67, 68, 69-70, 74-75, and 77-79, correspond to original claims 3, 6-8, 10-14, 16, 18, 19-20, 25-26, and 27-29 respectively, with some changes detailed below; and

new claims 71, 72 and 73 have been added.

In the Final Office Action dated April 14, 2009, claims 4-9, 11-13, 15, 16, 18, 20-27, 29, 33, 34, 37-44, 46-51 and 53-55 were finally rejected.

In a pre-appeal brief in response to the Final Office Action, Applicants submitted that the Examiner has not provided a *prima facie* case in support of the rejections of the claims since the above-mentioned references fail to teach at least two features of the independent claims:

(1) That none of the references teach "injecting through the line interface noise which forces a retrain of the modem connection" as recited in claims 16, 18, and 53.

In the response filed on January 21, 2009 Applicants disagreed with the Examiner and argued that that Downey's system controls the modems, and provides explicit commands to retrain, rather than injecting noise and having the noise cause retrains.

(2) That none of the references teach "injecting the noise comprises connecting a low impedance circuit, for at least some of the frequency bands carrying signals, to the communication link", as recited in claim 16.

In the response filed on January 21, 2009 Applicants disagreed with the Examiner and submitted that Schneider, which is the reference cited, teaches *against* connecting a low impedance circuit.

In light of the fact that the Applicant's pre-appeal brief arguments were rejected, and under protest, Applicant cancels all outstanding claims without prejudice, reserving the right to possibly raise the claims in a later stage of prosecution and/or in a Divisional Application.

Support for the new claims and more detail regarding changes

New claims 56-79 are supported as follows:

New claim 56 is similar to original claim 30, with the following changes:

- without the restriction to xDSL modems. This change finds support at least on page 14, lines 11-13, of the present application, which states: "Although the above description relates to an ADSL connection, the invention is not limited to any specific modem connection, and may be used with other DSL connections as well as other modem connections, such as VBM connections.";

- adding a limitation of performing a determination on the collected signal, of physical quality or transmission characteristics, supported by original claims 1 and 28; and

- amending to clarify the mode of operation by changing 'collecting signals' to 'passively collecting signals', as supported in the disclosure, see, for example, 1st paragraph of the Summary of the Invention, page 2).

New claim 57 states in dependent form some of the limitations of original claim 1.

Claims 58, 59-61, 62-66, 67, 68, 69-70, 74-75, and 77-79, correspond to original claims 3, 6-8, 10-14, 16, 18, 19-20, 25-26, and 27-29 respectively.

Dependent claim 58 was amended to use the general term xDSL appearing in original claim 30, instead of the more limited term ADSL.

Claims 60-64 and 74-75 were amended to match the words of new claim 56 for antecedent purposes.

New claim 62 details the "providing information on noise levels on the connection". The limitation of claim 62 is supported in the disclosure, for example, "...controller 220 also searches for lower layer causes of problematic higher layer effects. For example, when a retransmission of data is requested, controller 220

optionally searches to see if, at the time the original data was transmitted, there was an interference on the line, such as an unusual noise level, a low signal to noise ratio (SNR) (see the last paragraph of page 10 and the next paragraph on page 11).

Claim 66 was amended to remove the term "the performance analyzer" which lacks antecedent. In addition, the term injecting noise was removed from claim 66, and claims 67 and 68 were amended accordingly.

Claim 70 adds the subject of original claims 21-22 as examples. Claim 70 finds support, *inter alia*, on page 4, lines 11-17 of the specification.

New claim 71 defines a particular case of claim 70. . Claim 70 finds support, *inter alia*, on page 4, line 14 of the specification.

New claims 72 and 73 have been added, depending from claim 70, and providing further detail on changes in the operation of the modem connection and suggested causes of the changes.

New claim 72 is supported, *inter alia*, by the last paragraph in page 10 and the first paragraph in page 11 of the specification, which teaches: "when a retransmission of data is requested", "CRC errors, corrupted bits, and/or low performance of Reed Solomon decoding", and "one of the modems requests a change in the bit allocation of the frequency band".

New claim 73 is supported, *inter alia*, by the last paragraph in page 10 and the first paragraph in page 11 of the specification, which teaches: "an unusual noise level, a low signal to noise ratio (SNR), a high attenuation level and/or if the modem suffered from skew".

Remarks on the patentability of the new claims

Claim 56 is a combination of originally filed claim 30 and claim 28, with some additional changes.

The Examiner rejected claim 28 over Van Den Brink, in an office action dated 26 October 2006, stating that Van Den Brink discloses … a processor adapted to determine one or more quality or transmission characteristics regarding the modem connection ….

Applicants submit that the present limitations of claim 56: "<u>passively collecting signals</u>" and "determining one or more <u>physical quality</u> or <u>transmission characteristics</u> regarding the modem connection, responsive to the collected signals;" (emphasis added) are not taught by Van Den Brink. Applicants have studied Van Den Brink, and especially paragraph 0069 which is cited by the Examiner, and find that Van Den Brink teaches injecting a signal, superposing upon the transceived signal. Van Den Brink teaches injecting a predetermined signal (A) onto the transceived signal (B), and evaluates the result of A+B. Using such terms, it is seen that Van Den Brink does not determine physical quality or transmission characteristics of B alone.

The Examiner rejected claim 28 over Webster & Downey, in an office action dated 11 June 2007, stating that Downey discloses a human interface adapted to provide information of the determined information content.

Applicants submit that the present limitation of claim 56: "determining one or more <u>physical quality</u> or <u>transmission characteristics</u> regarding the modem connection, responsive to the collected signals;" (emphasis added) are not taught by Downey. Applicants have studied Downey, and especially paragraph Fig. 1, & col. 1, lines 55-62 & col. 2, lines 10-19 & col. 6 lines 7-10 of Downey which are cited by the Examiner, and additionally col. 3, lines 15-20 & Fig. 2 & col. 5, lines 42-47 of Downey. Applicants find that Downey teaches storage and display of "test parameters, i.e., line simulator configuration data and modem configuration data, and test results". Those are all the parameters taught by Downey. Using the terms A and B introduced

above, Downey does not analyze either A or B, rather Downey records under what conditions (length of line simulated, etc.) the tests were made, and the results of the test. Downey records external conditions, not _physical quality_ or _transmission characteristics_ regarding the modem connection.

It remains to be seen whether a combination of Van Den Brink and Downey would teach new claim 56. Applicants submit that the combination does not, because the combination still does not teach combining "passively collecting signals", "determining one or more physical quality or transmission characteristics regarding the modem connection".

In view of the above amendments and remarks it is respectfully submitted that claims 56-79 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

/Jason H. Rosenblum/

Jason H. Rosenblum
Registration No. 56,437
Telephone: 718.246.8482

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Enclosures:
- Petition for Extension (One Month)
- Request for Continued Examination (RCE)